



**Saskatchewan
Highways and
Transportation**

2001 Ferry Traffic and Seasonal Road

Annual Report

**Operational Planning and
Business Support Branch**

Table of Contents

Table of Contents	i
Executive Summary	iii
1.0 Introduction	1
2.0 Background	2
3.0 Ferry Operating Seasons	4
4.0 Traffic Volumes	5
4.1 Saskatoon Area	6
4.2 Prince Albert Area	9
4.3 North Battleford Area	11
4.4 Swift Current Area	12
4.5 Moose Jaw Area	15
5.0 Vehicle Classifications	16
5.1 Saskatoon Area	17
5.2 Prince Albert Area	19
5.3 North Battleford Area	21
5.4 Swift Current Area	22
5.5 Moose Jaw Area	24
6.0 Wollaston Barge Ferry	25
7.0 Passengers	27
7.1 Moose Jaw Area	28
8.0 Seasonal Roads	29
8.1 Cumberland House Seasonal Road	29
8.2 Riverhurst Seasonal Road	30
8.3 Wollaston Lake Ice Road	31
8.4 Athabasca Basin Seasonal Road	32
9.0 Conclusions	34
9.1 Operating Season/Downtime	34
9.2 Traffic Volumes	34
9.3 Vehicle Classification	35
10.0 Recommendation	36

Appendix A
Appendix B
Appendix C
Appendix D

Vehicle Classification Forms
2001 Ferry Downtime
Historic Traffic Volumes
Historic Passenger Volumes

EXECUTIVE SUMMARY

This report summarizes traffic data collected at the 12 cable-stayed ferries and the one free swimming ferry barge operating in Saskatchewan during 2001. The report includes analysis of passenger and vehicle volumes and traffic composition. Information about four seasonal roads operated in conjunction with the highway system is also included.

Analysis of operational data from the seasonal roads are very difficult because their operational season lengths are so heavily affected by weather. In 2001, all four seasonal roads were opened. Construction of the over land route from Stony Rapids to Shasko Bay started in October and was completed in December.

The main findings of the 2001 report are listed below.

- The ferry system operated above the 10 year average traffic levels. However, half of the 12 cable ferries carried less traffic than in 2000.
- The Clarkboro ferry had record traffic levels in 2001 and carried the largest number of vehicles.
- Formation of a sandbar at the Lancer ferry, caused the ferry to be shutdown in August. This shutdown shifted traffic to the neighbouring Lemsford ferry.
- Low water levels caused the ferries on the South Saskatchewan River in the Swift Current and Saskatoon areas to lower carrying capacity. As a result, they carried fewer vehicles per trip and did not carry large trucks.

The 2001 report recommends:

- Wollaston Barge ferry operators be required to use the same vehicle type classification system used by the other ferries, when their operating agreement is renegotiated.
- Collection of passenger data be begun on the St. Laurent ferry in 2002.

1.0 Introduction

This annual report summarizes and presents an analysis of the traffic that used the provincial ferry system in 2001. Traffic data is presented for all of the 13 ferry sites that operated in the province in 2001. Passenger data from most of the ferry sites and operational information about the seasonal roads operated by the Department has also been included in this annual report.

This report also examines the history of traffic volumes and vehicle types using each ferry. Examination of the distribution and composition of ferry traffic gives useful insights into the function of each ferry.

Your attention is drawn to the following points about this report:

- Differences in the data from ferry to ferry are as important as the data itself.
- The vehicle classification data for some vehicles are too small a sample to support accurate conclusions.
- Operational data, such as open and close dates, from the seasonal roads are not comparable from road to road.

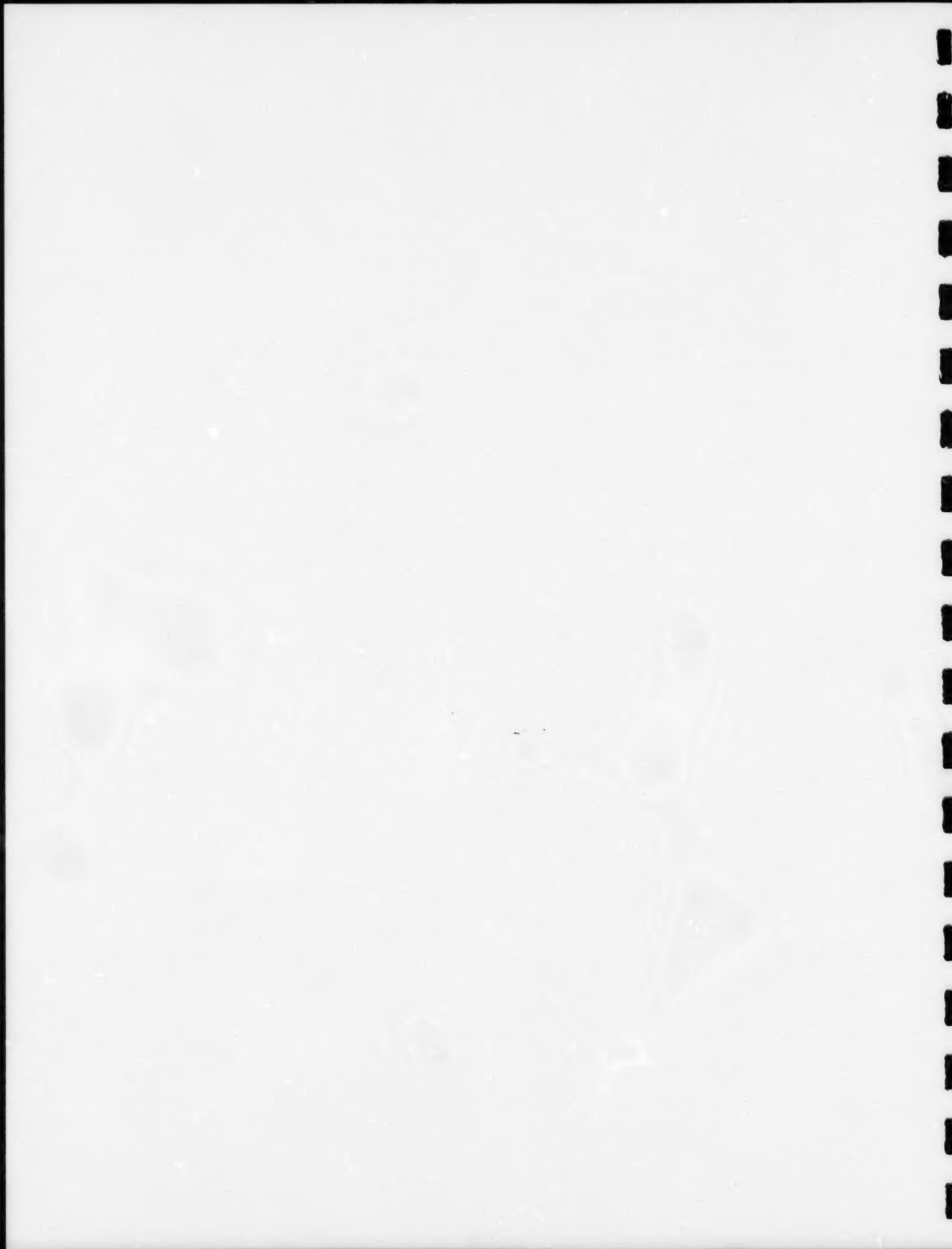
2.0 Background

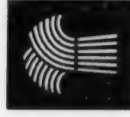
The department operated 12 cable-stayed ferries and one free swimming ferry barge during 2001. Of the cable-stayed ferries, 11 cable ferries operated on the North and South Saskatchewan rivers and one on Lake Diefenbaker. The only free swimming ferry in the province operates on Wollaston Lake to serve the village of Wollaston Lake. Other than the closure of the Cumberland ferry, the ferry system has remained unchanged since responsibility for the system was moved to the Department.

Presently, ferry traffic data is collected by the ferry operators and forwarded to the Traffic Engineer for entry into the department databases and compilation of this annual report. The vehicle classification forms used by ferry operators are shown in Appendix A. This annual report documents the traffic using the ferry system and examines trends in the character and volume of the traffic.

The department also operates a system of four seasonal roads that provide highway linkages to isolated communities and seasonal industrial activities during the winter months. The operational periods of the seasonal roads vary greatly from year to year because of weather conditions.

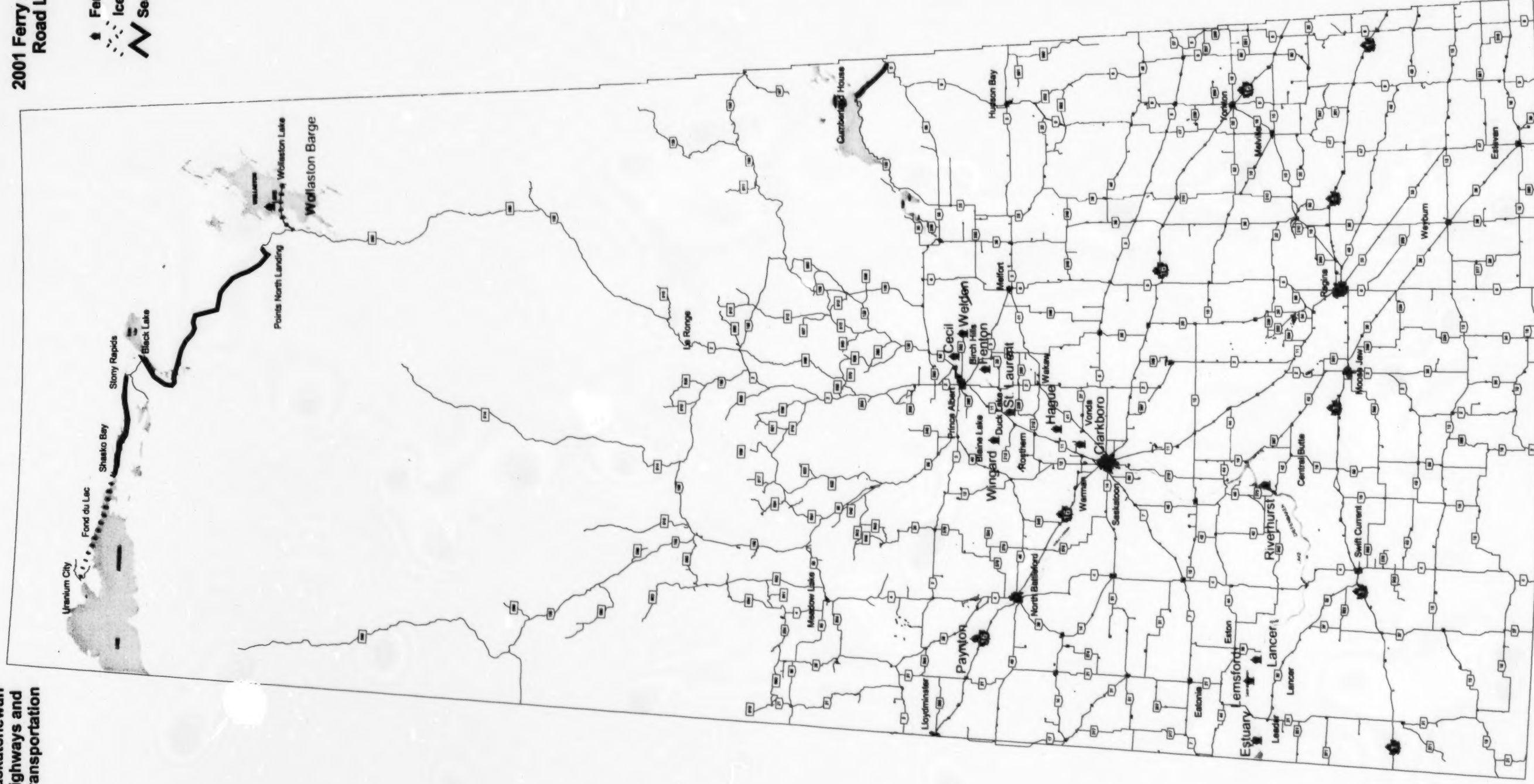
The locations of the ferries and seasonal roads, including ice crossings, are shown on the map on the following page.





2001 Ferry and Seasonal
Road Locations

- Ferry Location
- Ice Crossing
- Seasonal Road



3.0 Ferry Operating Seasons

All ferries, except the Riverhurst ferry and the Wollaston Barge ferry, operate 12 hours per day between the hours of 7:00 am and 7:00 pm. The Riverhurst ferry operates 24 hours per day. Ferries do not run at times because of mechanical failure, bad weather or poor river conditions. The table below summarizes the 2001 operational season including downtime at all the ferries in the system. Details of the downtime periods and their causes are shown in Appendix B.

Table 1. 2001 Ferry Operating Season Statistics

Ferry	Season			Out of Service	
	Opening	Closing	Length (days)	Hours	Percent
Clarkboro	10-Apr	24-Nov	229		0.0
Riverhurst	29-Apr	21-Dec	237	68	1.2
Paynton	24-Apr	9-Nov	200	12	0.5
Weldon	30-Apr	7-Nov	192		0.0
St. Laurent	24-Apr	24-Nov	215		0.0
Lemsford	12-Apr	25-Nov	228	12	0.4
Wingard	24-Apr	11-Nov	202	24	1.0
Cecil	27-Apr	7-Nov	195		0.0
Hague	23-Apr	24-Nov	216		0.0
Estuary	12-Apr	26-Oct	198		0.0
Fenton	1-May	7-Nov	191		0.0
Lancer	11-Apr	11-Aug	123	312	21.1

4.0 Traffic Volumes

The table below summarizes the 2001 monthly traffic at all of the cable ferry sites. Historic traffic volumes for these ferries are shown in Appendix C.

Table 2. Monthly Ferry Traffic Volumes for the 2001 Season

Ferry	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
Clarkboro	3 834	7 686	8 585	8 706	8 965	7 895	7 754	5 242		58 667
Riverhurst	88	5 844	7 725	10 751	7 695	6 184	4 494	3 637	1 449	47 867
Paynton	1 072	4 485	5 145	6 150	4 654	4 573	4 317	952		31 348
Weldon	30	4 155	3 978	4 381	5 439	4 249	3 112	531		25 875
St. Laurent	599	3 118	4 259	5 974	3 345	2 634	2 460	1 407		23 796
Lemsford	891	2 003	2 304	2 982	2 579	2 186	1 680	1 034		15 659
Wingard	248	1 685	1 925	2 306	3 225	1 781	1 517	471		13 158
Cecil	219	1 849	2 016	2 264	2 694	2 204	1 555	272		13 073
Hague	570	1 790	1 726	2 005	2 083	1 902	1 578	998		12 652
Estuary	624	1 282	1 375	2 161	1 625	1 498	976			9 541
Fenton		1 333	1 429	1 505	1 564	1 429	1 065	238		8 563
Lancer	532	125	800	1 279	588					3 324
Monthly Totals	8 707	35 355	41 267	50 464	44 456	36 535	30 508	14 782	1 449	263 523

To facilitate systematic analysis, the ferry traffic data are grouped by maintenance area. This system results in five groupings: Saskatoon, Prince Albert, North Battleford, Swift Current and Moose Jaw.

4.1 Saskatoon Area

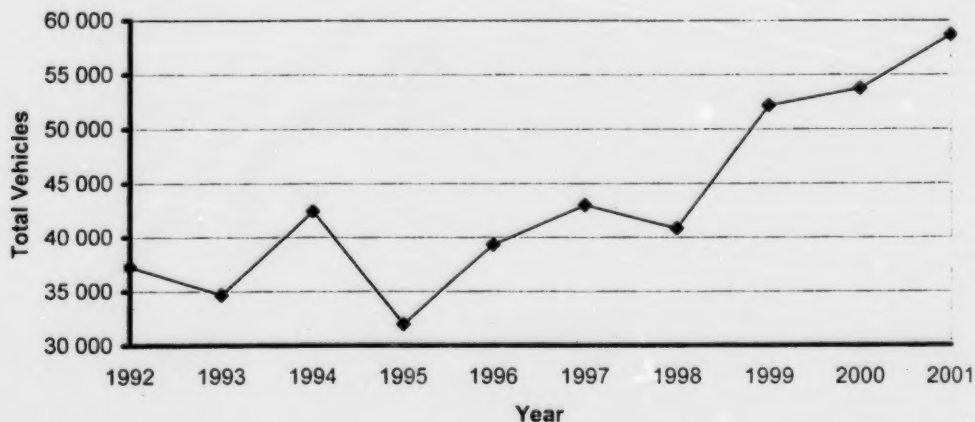
The Saskatoon area contains four ferries: Clarkboro, Hague, St. Laurent and Wingard. The neighboring Clarkboro and Hague ferries have historically carried annual traffic in the 44 000 and 14 000 vehicles per year range respectively. The St. Laurent and Wingard ferries have historically carried annual traffic in the 23 000 and 11 000 vehicles range respectively. In 2001, traffic at the Clarkboro ferry rose above the peak volumes seen in 2000 to over 58 000 vehicles. These sustained peak volumes are likely due to strong economic activity in and around the city of Saskatoon. Traffic on the Hague ferry improved slightly over last year. In 2001, traffic at the St. Laurent ferry decreased from the high volume of vehicles first seen in 1999, carrying approximately 24 000 vehicles. The Wingard ferry has increased to record high volumes.

Overall, traffic volumes have increased this year. The only exception was the 21 percent decrease at St. Laurent.

The Clarkboro, Hague and St. Laurent ferries, which are located on the South Saskatchewan River, had low water problems in 2001. These ferries reduced their carrying weights by lowering the number of vehicles per trip. Large trucks were not allowed on the ferries and were diverted to other routes. The lower water levels resulted in minor delay increases for passenger vehicles and longer haul distances for large trucks.

Chart 4.1A 10 Year History of Traffic on the Clarkboro Ferry

10 Year Traffic History on the Clarkboro Ferry

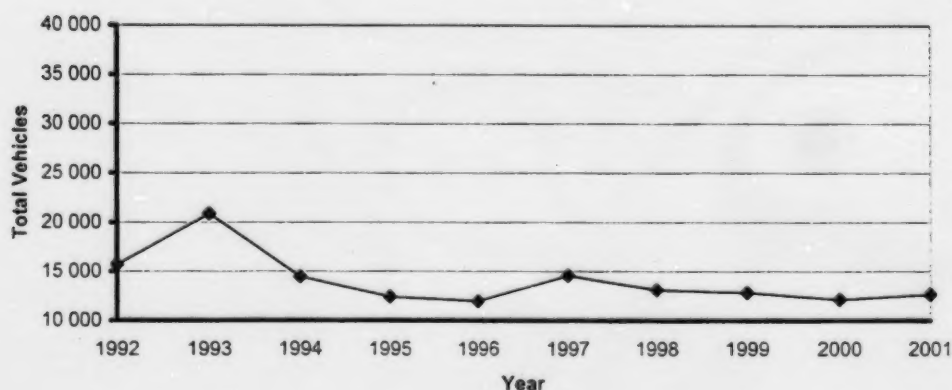


1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
37 284	34 674	42 448	31 975	39 338	42 991	40 839	52 185	53 780	58 667

Traffic on the Clarkboro ferry continued the trend upward begun in 1996 likely due to strong economic activity in Saskatoon and farmers commuting to off-farm jobs.

Chart 4.1B 10 Year History of Traffic on the Hague Ferry

10 Year Traffic History on the Hague Ferry

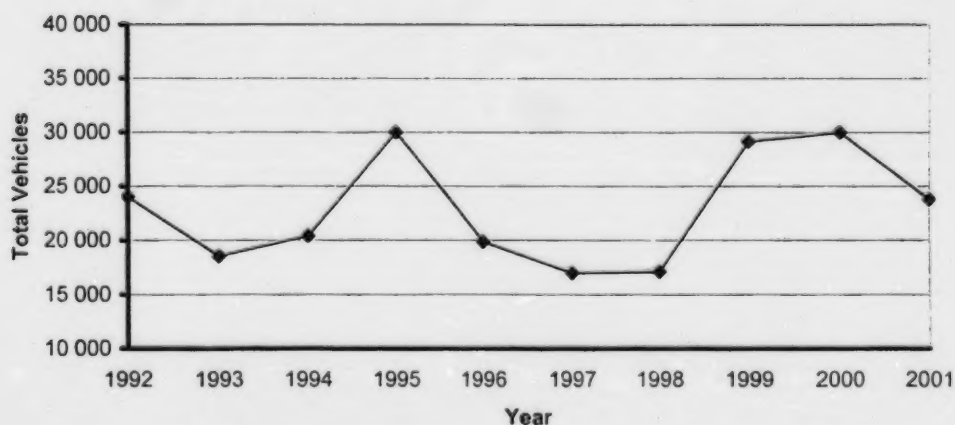


1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
15 700	20 883	14 442	12 425	11 961	14 577	13 122	12 845	12 156	12 652

Traffic on the Hague ferry increased over four percent from 2000, but is still below the ten year average.

Chart 4.1C 10 Year History of Traffic on the St. Laurent Ferry

10 Year Traffic History on the St. Laurent Ferry

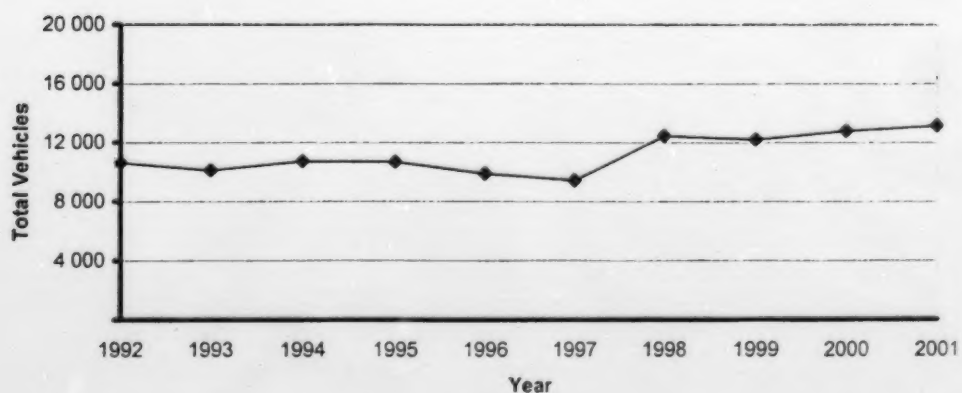


1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
24 017	18 556	20 421	30 030	19 875	16 987	17 133	29 143	29 980	23 796

2001 traffic on the St. Laurent ferry decreased over 20 percent from the record high in 2000, but it is still above the ten year average.

Chart 4.1D 10 Year History of Traffic on the Wingard Ferry

10 Year Traffic History on the Wingard Ferry



1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
10 628	10 115	10 719	10 687	9 878	9 420	12 467	12 227	12 791	13 158

Traffic on the Wingard ferry continued the trend upwards to a new high in 2001.

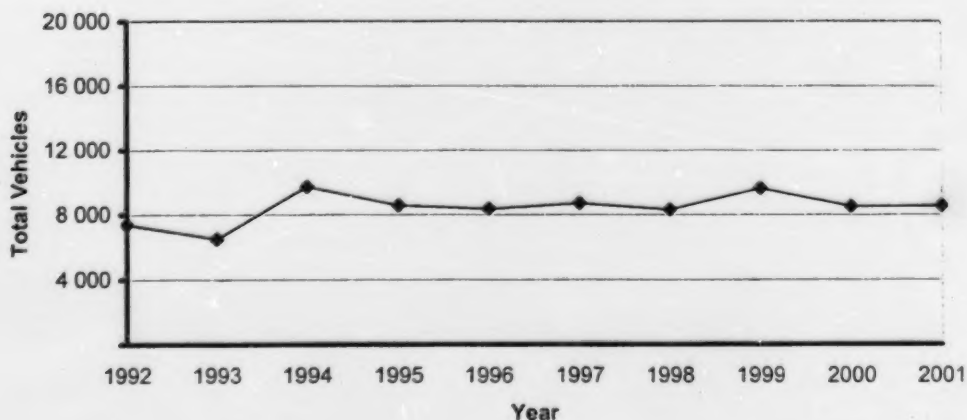
4.2 Prince Albert Area

The Prince Albert area includes the Fenton, Weldon and Cecil ferries. The 2001 traffic volumes varied considerably from the 2000 values. One location had an increase, one a decrease and the other remained constant.

Low water had little effect on the ferries in the Prince Albert area. The river was dredged in the fall of 2000 in anticipation of sandbars creating problems in 2001.

Chart 4.2A 10 Year History of Traffic on the Fenton Ferry

10 Year Traffic History on the Fenton Ferry

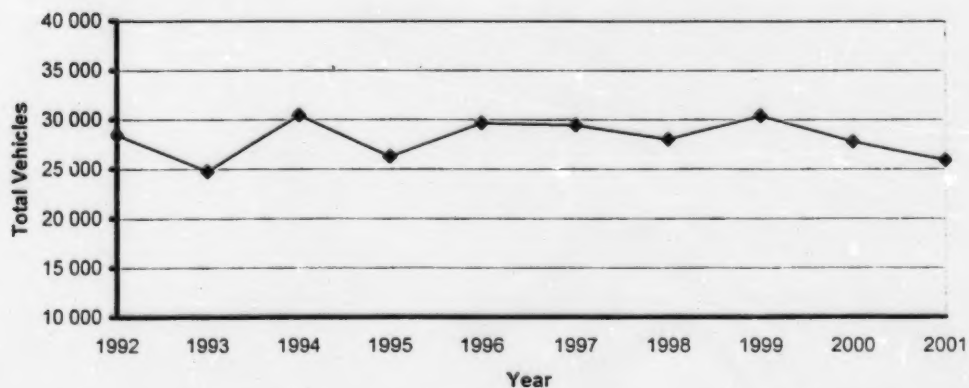


1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
7 394	6 517	9 730	8 582	8 366	8 716	8 324	9 640	8 533	8 563

2001 traffic on the Fenton ferry was very similar to the 2000 volumes. Excluding 1999, the traffic has been extremely stable since 1995.

Chart 4.2B 10 Year History of Traffic on the Weldon Ferry

10 Year Traffic History on the Weldon Ferry

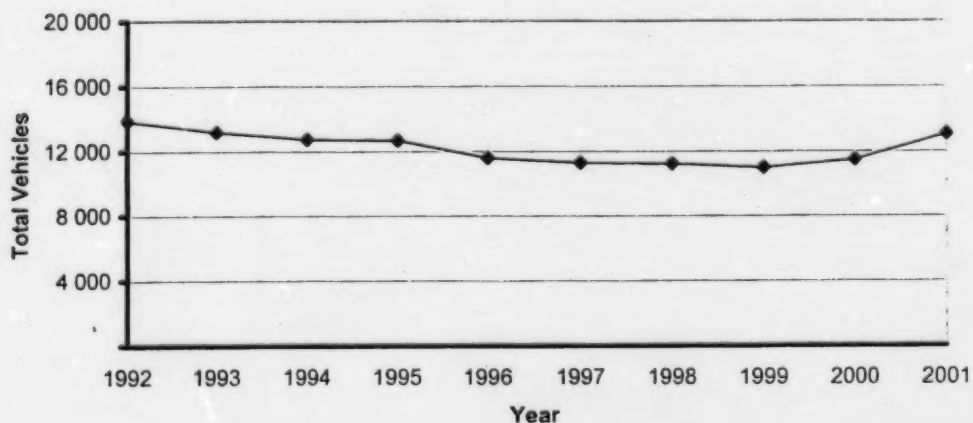


1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
28 460	24 754	30 465	26 268	29 657	29 455	28 003	30 382	27 770	25 875

In 2001, the Weldon ferry continued the downward trend started last year.

Chart 4.2C 10 Year History of Traffic on the Cecil Ferry

10 Year Traffic History on the Cecil Ferry



1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
13 887	13 210	12 752	12 678	11 603	11 303	11 234	11 016	11 484	13 073

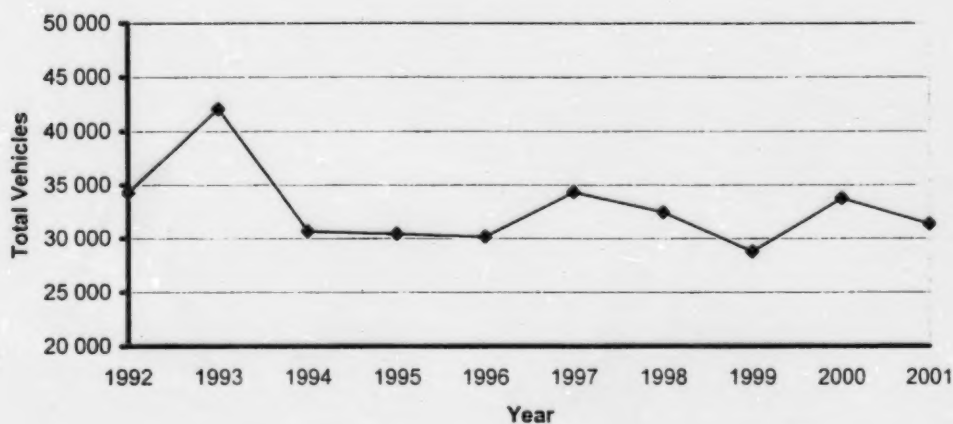
The Cecil ferry traffic continued the upward trend started after the low volumes recorded in 1999.

4.3 North Battleford Area

The North Battleford area has only the Paynton ferry. Paynton has carried an average of 32 800 vehicles over the past ten years. Traffic volumes at Paynton have been reasonably steady over the last ten years. The only major variation was the 42 100 vehicle peak recorded in 1993. The 1993 peak was 28 percent above the ten year average of 32 800 vehicle per year. Since 1994, traffic volumes at Paynton have been stable at 29 000 to 34 000 vehicles per year.

Chart 4.3A 10 Year History of Traffic on the Paynton Ferry

10 Year Traffic History on the Paynton Ferry



1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
34 293	42 058	30 686	30 453	30 172	34 365	32 453	28 808	33 749	31 348

2001 Traffic volumes at Paynton decreased from 2000 by seven percent and were slightly below the ten year average.

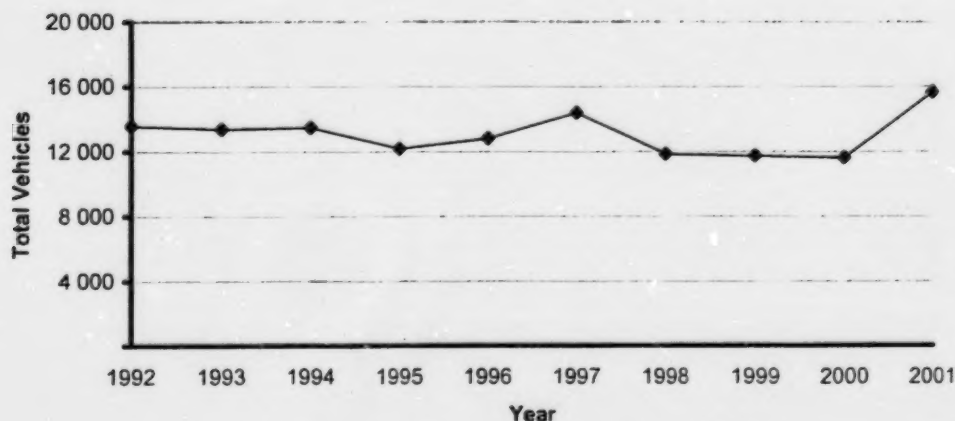
4.4 Swift Current Area

The Swift Current area has three ferries: Lemsford, Lancer and Estuary. Traffic volumes carried by the Swift Current area ferries were quite varied this year compared to previous years.

The Lancer ferry shut down August 11th for the season because a sandbar formed across the ferry route. As a result, many vehicles used the Lemsford ferry, increasing traffic volumes at Lemsford over last year. The Lemsford and Estuary ferries also struggled with low water problems, but were able to continue operation by lightening loads. The Lemsford ferry moved to an alternate location where the water depths were greater.

Chart 4.4A 10 Year History of Traffic on the Lemsford Ferry

10 Year Traffic History on the Lemsford Ferry

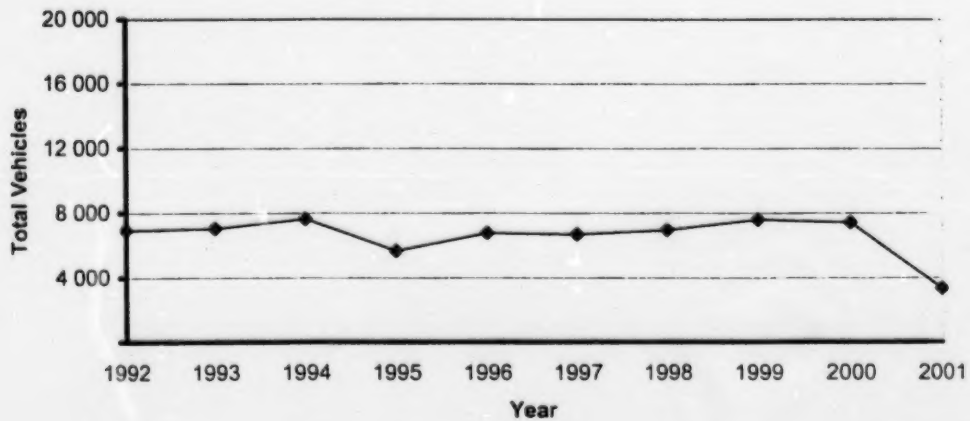


1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
13 588	13 381	13 471	12 170	12 805	14 393	11 849	11 730	11 623	15 659

2001 traffic on the Lemsford ferry increased 35 percent to the highest levels in the last ten years. This increase can be attributed to the shut down of the Lancer ferry. Compared to 2000, The Lancer ferry had 4000 fewer vehicles and the Lemsford ferry had 4000 more. This direct relationship indicates that the demand for river crossings is quite inelastic, provided an alternate crossing is not too distant.

Chart 4.4B 10 Year History of Traffic on the Lancer Ferry

10 Year Traffic History on the Lancer Ferry

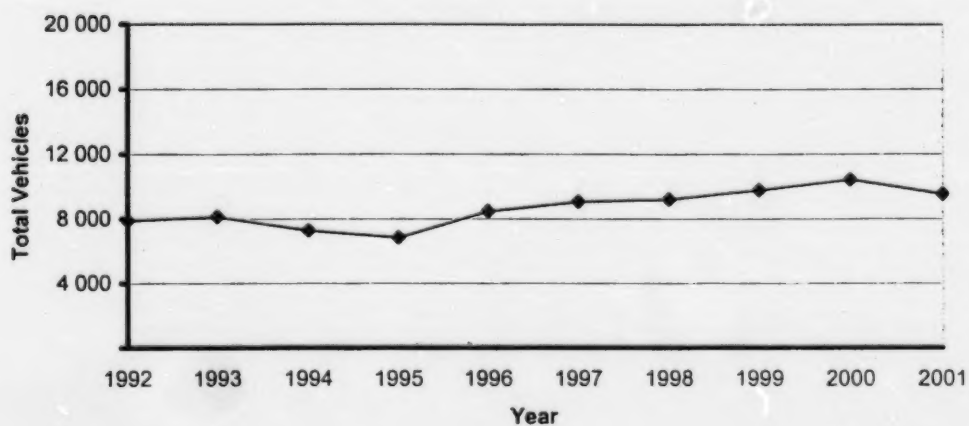


1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
6 928	7 047	7 649	5 673	6 789	6 685	6 967	7 604	7 421	3 324

The Lancer ferry was closed for the season August 11th because a sandbar formed under the stay cable. The premature closure reduced traffic volumes on the ferry in 2001 by 55 percent.

Chart 4.4C 10 Year History of Traffic on the Estuary Ferry

10 Year Traffic History on the Estuary Ferry



1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
7 900	8 153	7 278	6 844	8 463	9 058	9 217	9 793	10 437	9 541

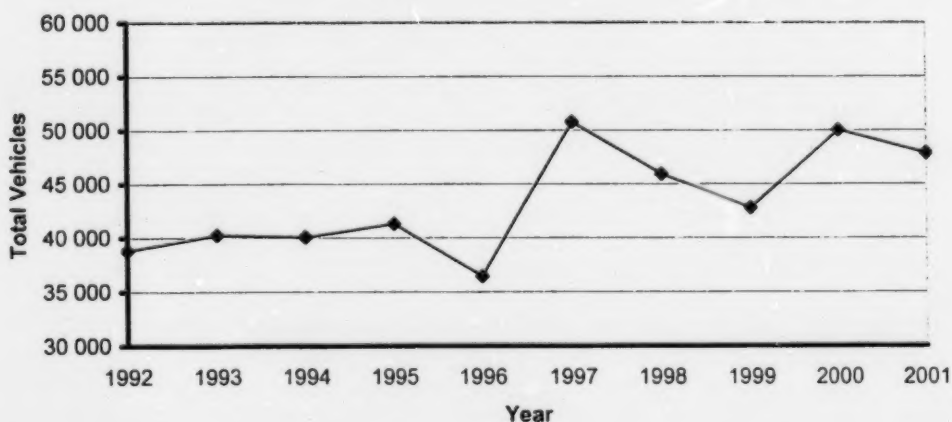
Traffic on the Estuary ferry decreased by nine percent from 2000, but was still well above the ten year average.

4.5 Moose Jaw Area

The Moose Jaw area contains only the Riverhurst ferry, which is the largest and most sophisticated cable ferry in the province. Unlike any other cable ferry in the system, Riverhurst is located on a provincial highway, No. 42, and carries vehicles two kilometres across Lake Diefenbaker. The Riverhurst ferry has carried traffic volumes in the 43 000 vehicles per year range over the last ten years. In 2001, traffic was approximately 48 000.

Chart 4.5A 10 Year History of Traffic on the Riverhurst Ferry

10 Year Traffic History on the Riverhurst Ferry



1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
38 835	40 242	40 076	41 291	36 449	50 766	45 915	42 775	50 007	47 867

Traffic on the Riverhurst ferry has decreased by four percent since 2000, but volumes are still well above the ten year average.

5.0 Vehicle Classifications

Ferry operators record traffic using the ferries by vehicle type. The vehicle classification analysis is divided into the same geographical areas used for traffic volumes. In 2001, low water levels on the South Saskatchewan river caused some large trucks to be diverted to alternate routes at the Clarkboro, Hague, St. Laurent, Lemsford, Lancer and Estuary ferries. The breakdown of vehicle types for each location is summarized in the charts below.

Chart 5.0A 2001 Vehicle Types by Location

2001 Vehicle Types by Location

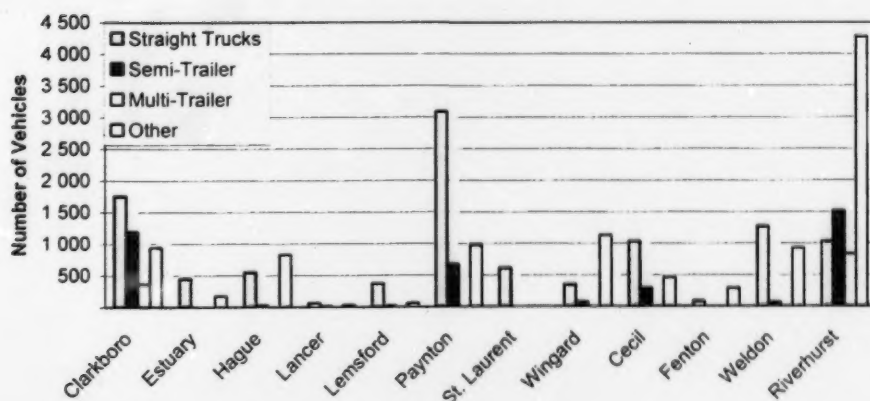
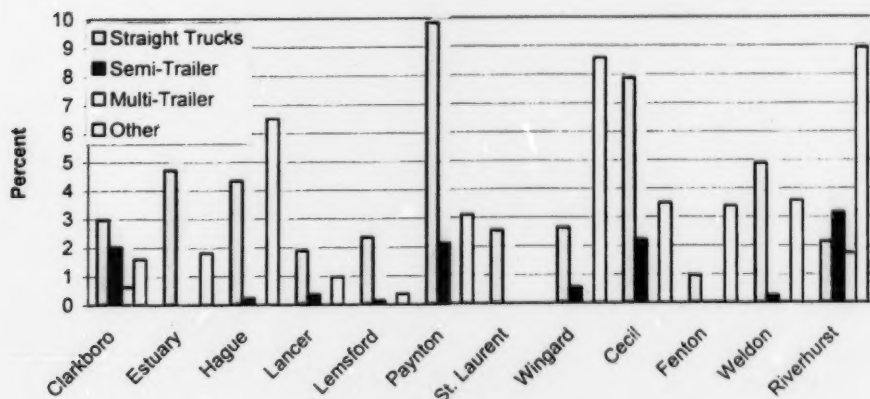


Chart 5.0B 2001 Vehicle Type Percentages by Location

2001 Vehicle Type Percentages by Location



5.1 Saskatoon Area

The Hague ferry and the Wingard ferry carry a high percentage of "other" vehicles, indicating that these ferries are on local routes used by farmers. The vehicle category "other" normally refers to farm or construction equipment except near recreation areas, where they are often passenger vehicles pulling boat or camping trailers.

Chart 5.1A 2001 Vehicle Types Using the Clarkboro Ferry

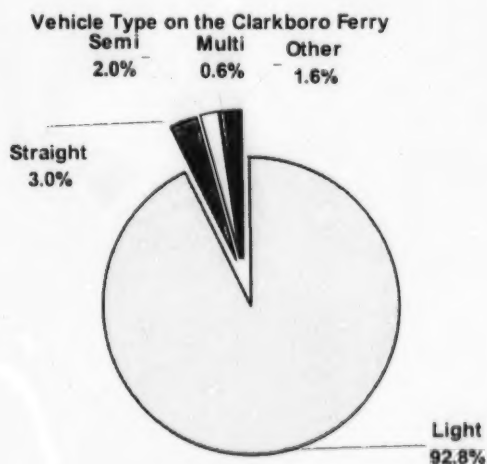


Chart 5.1B 2001 Vehicle Types Using the Hague Ferry

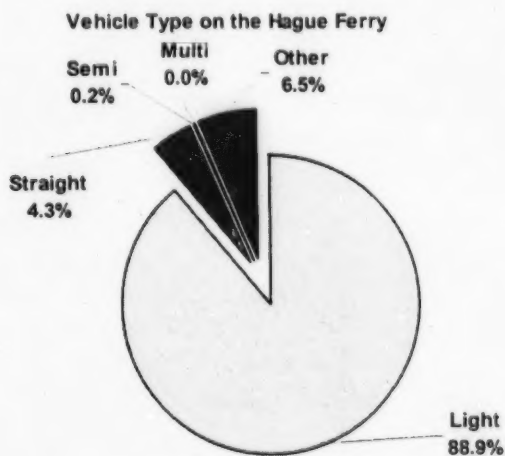


Chart 5.1C 2001 Vehicle Types Using the St. Laurent Ferry

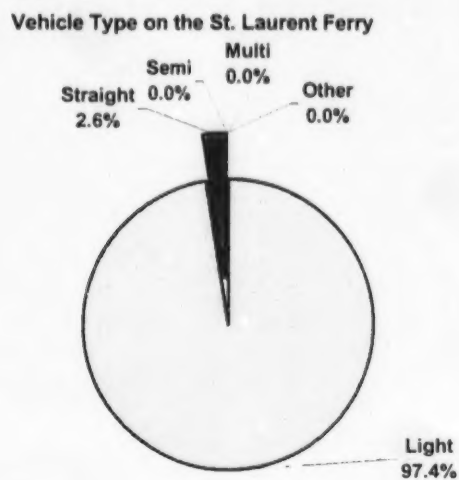
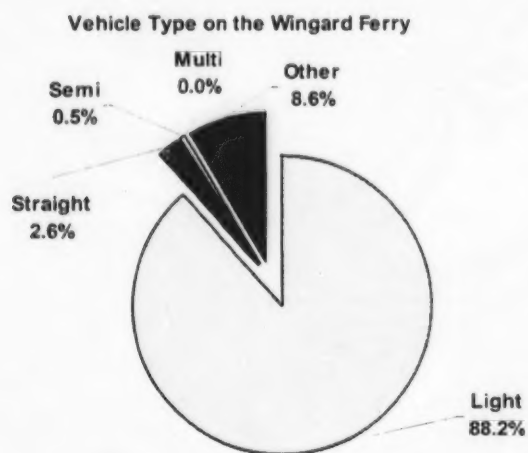


Chart 5.1D 2001 Vehicle Types Using the Wingard Ferry



5.2 Prince Albert Area

Cecil and Weldon carry a greater proportion of heavy trucks than the Fenton ferry. The high percentage of non-articulated trucks at Cecil indicates that it is on a short distance haul route for agricultural products. Weldon carries vehicle types that are indicative of a local route used by farmers on a day to day basis as they go about working their land. Weldon has moderate numbers of non-articulated trucks and a significant amount of vehicles normally interpreted as farm equipment. Traffic on the Fenton ferry was almost exclusively passenger vehicles.

Chart 5.2A 2001 Vehicle Types Using the Fenton Ferry

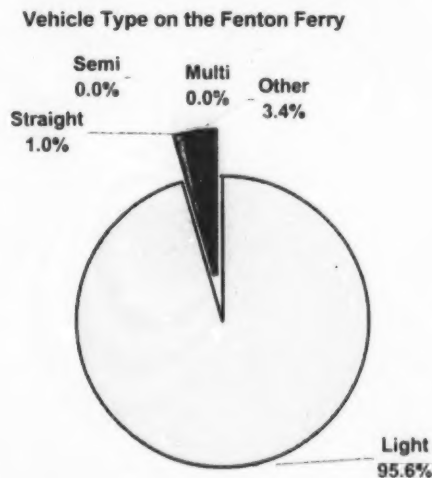


Chart 5.2B 2001 Vehicle Types Using the Weldon Ferry

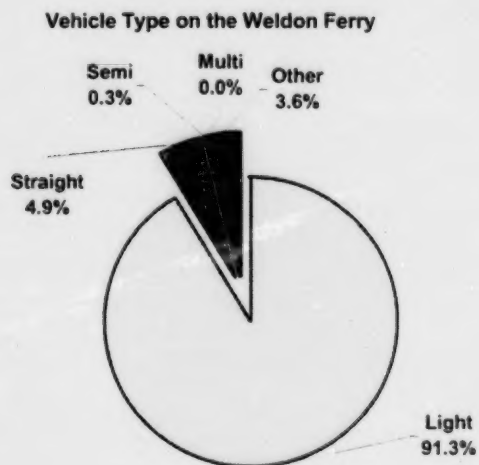
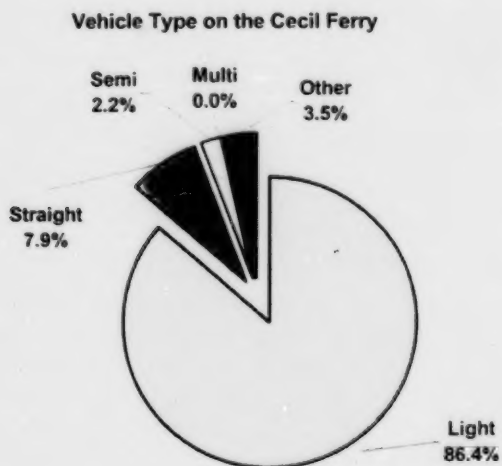


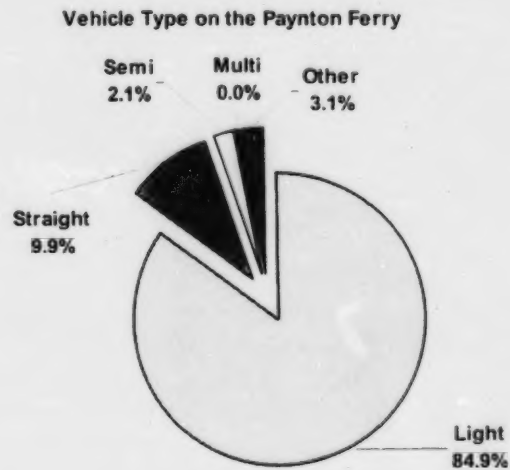
Chart 5.2C 2001 Vehicle Types Using the Cecil Ferry



5.3 North Battleford Area

The Paynton ferry serves a predominately rural population as shown by the high percentage of non-articulated trucks. Paynton also serves as a link to highway No.16 for freight haul demonstrated by the relatively high percentage of single trailer semis that used the ferry in 2001.

Chart 5.3A 2001 Vehicle Types Using the Paynton Ferry



5.4 Swift Current Area

The Swift Current area ferries all serve predominately rural populations. The Lemsford and Lancer ferries carry an almost identical vehicle mix of small percentages of non-articulated farm trucks, equipment and commercial single trailer semis. The Estuary ferry is unique in this area in that it carries a fairly higher percentage of farm trucks and farm equipment. Estuary apparently connects cattle operations south of the river to large hay flats located along the north side of the river.

Chart 5.4A 2001 Vehicle Types Using the Lemsford Ferry

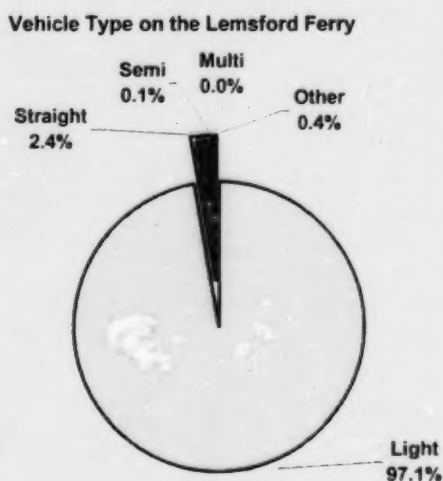


Chart 5.4B 2001 Vehicle Types Using the Lancer Ferry

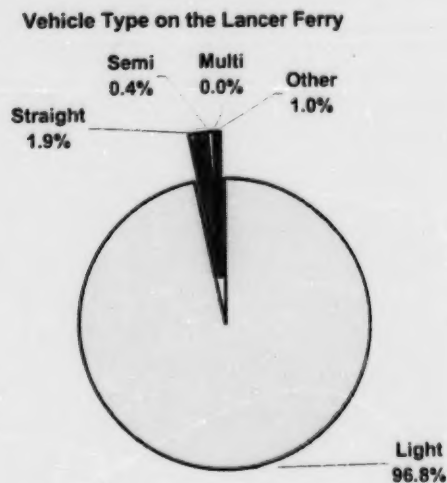
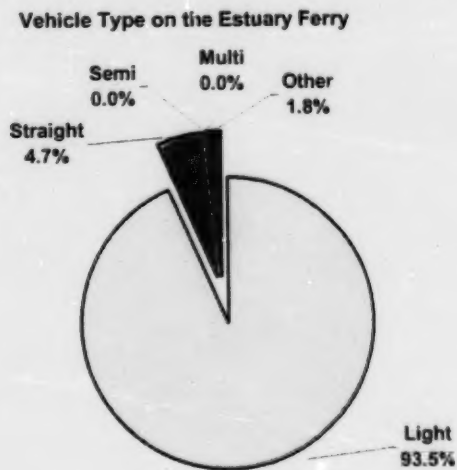


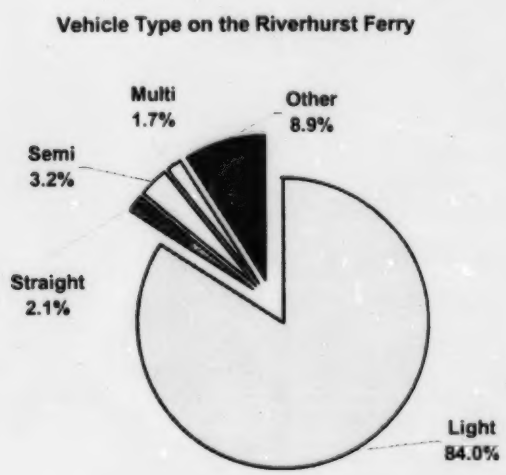
Chart 5.4C 2001 Vehicle Types Using the Estuary Ferry



5.5 Moose Jaw Area

The Riverhurst ferry is the largest and most sophisticated cable ferry in the system. It is also the only cable ferry located on the provincial highway system. The vehicle mix clearly shows that Riverhurst is a link in the highway system and is a vital link in the agricultural area around the crossing.

Chart 5.5A Vehicle Types Using the Riverhurst Ferry



6.0 Wollaston Barge Ferry

The Wollaston Barge ferry connects the community of Wollaston Lake to Highway No. 905. This ferry is unique in that it is the only free-swimming ferry operating in the province. The ferry is operated on behalf of the department by the Hatchet Lake Economic Development Corporation. The operational season at Wollaston Lake is shorter than other ferries in the province because of the northern location. This ferry carries quite low traffic volumes compared to the southern ferries. The route across the lake is long and only one round trip is possible each operational day. A total of 648 vehicles used this ferry in 2001, an increase of four percent over 2000. The ferry opened on June 27, 2001 and closed on October 22, 2001.

Table 3. History of the Wollaston Barge Ferry

Year	Opening	Closing	Total Vehicles
1999	12-Jun	10-Oct	559
2000	15-Jun	12-Oct	625
2001	27-Jun	22-Oct	648

The vehicle classification system used at Wollaston is different than that used by the rest of the ferry system. The three codes that are used at the Wollaston Barge ferry are described below.

Code 1 - Single Light Vehicle - any vehicle, car, truck (less than a 1 ton), motorcycle, etc.

Code 2 - Other - includes single vehicles with trailer, trucks over one ton, etc.

Code 3 - Full - Any vehicle, trailer, construction equipment or combination there-of.

Chart 6.1A 2001 Vehicle Types Using the Wollaston Barge Ferry

Vehicle Type on the Wollaston Barge Ferry



Not surprisingly, the Wollaston ferry carried the highest percentage of commercial vehicles in the province at 42 percent, the same as in 2000. Other than by air, this ferry is the only summer road access to Wollaston Lake. Passenger trips are not very numerous because the community is small and the trip across the lake and down the road to the nearest community is quite long.

7.0 Passengers

The table below summarizes the 2001 monthly number of passengers for the cable ferry sites. Historic passenger volumes for these ferries are shown in Appendix D.

Table 4. Monthly Ferry Passenger Volumes for the 2001 Season

Ferry	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
Clarkboro	6 609	12 706	14 768	15 744	14 915	12 525	12 689	8 698		98 654
Riverhurst	121	11 100	14 808	21 263	15 446	10 492	7 719	6 544	2 563	90 056
Paynton	1 825	7 420	9 058	12 252	8 228	8 128	7 048	1 516		55 475
Weldon	66	7 442	8 019	8 916	10 682	8 019	5 502	909		49 555
St. Laurent	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A
Lemsford	1 617	3 095	4 065	6 278	4 913	3 944	2 947	1 792		28 651
Wingard	540	3 527	5 278	5 894	9 067	4 099	3 794	1 061		33 260
Cecil	348	2 973	3 738	4 950	5 030	3 800	2 780	479		24 098
Hague	923	3 026	3 341	3 526	3 772	3 259	2 779	1 595		22 221
Estuary	1 070	2 351	2 546	4 246	3 255	2 722	1 855			18 045
Fenton		1 992	2 271	2 489	2 481	2 119	1 560	324		13 236
Lancer	901	224	1 463	2 380	1 145					6 113
Totals	14 020	55 856	69 355	87 938	78 934	59 107	48 673	22 918	2 563	439 364

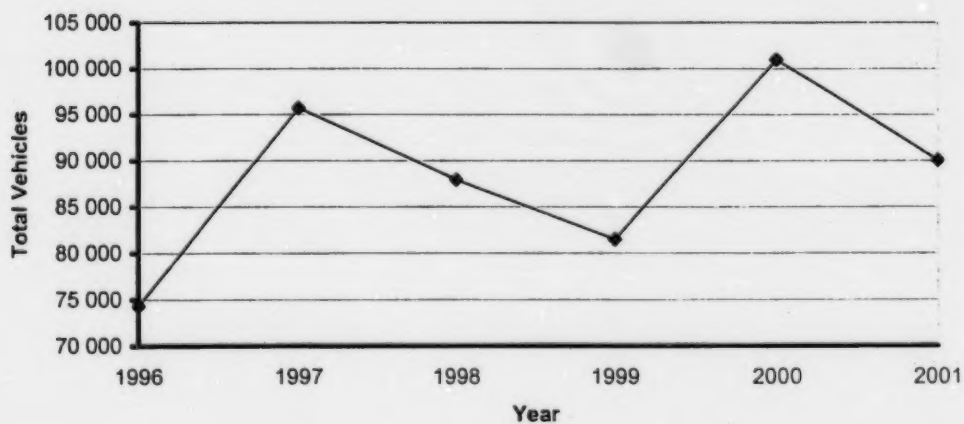
The passenger volumes were first recorded in 2000, except for Riverhurst where volumes have been recorded since 1996. Passenger totals for St. Laurent were not recorded in 2001 and the Lancer volumes are low due to the ferry closure August 11th.

7.1 Moose Jaw Area

The Riverhurst ferry has been recording passenger volumes since 1996.

Chart 7.1A Passenger History on the Riverhurst Ferry

Passenger History on the Riverhurst Ferry



1996	1997	1998	1999	2000	2001
74 355	95 671	87 956	81 526	100 979	90 056

The 2001 volume of passengers on the Riverhurst ferry decreased by over ten percent, but is still above the six year average of 88 400.

8.0 Seasonal Roads

Four seasonal roads were operated by the department in 2001: the Cumberland House road, the Riverhurst road, the Wollaston Barge road and the Athabasca Basin road.

The length of seasonal roads can vary from year to year to avoid areas that were troublesome the previous year. Local traffic often uses the roads both before and after the official season.

8.1 Cumberland House Seasonal Road

The Cumberland House seasonal road has been operating since the 1992-1993 winter season. In 2001, the Cumberland House road officially opened to local traffic on January 3rd and closed March 13th. The road is 52 km long and intersects with the north end of Highway No. 9 just west of the Manitoba boundary. The Cumberland House seasonal road is operated under an agreement with the forestry company Weyerhaeuser. The first 17 km east of Cumberland House is maintained by Weyerhaeuser and the remaining 35 km by the department.

The seasonal road was open for traffic for 71 days in 2001. An estimated ten vehicles per day used the road in 2001, for a total of 710 vehicles during the operating season. Total expenditures for the Cumberland road in 2001 was \$14,242 for a unit cost of \$407 per km or \$201 per day of operation. The available history of the Cumberland House seasonal road is shown in table below.

Table 5. History of the Cumberland Seasonal Road

Year	Opening	Closing	Length (days)	Cost
1993	13-Jan	5-Mar	52	\$27,685
1994	24-Jan	29-Mar	65	\$18,000
1995	10-Jan	28-Mar	78	\$2,707
1996	1-Dec	12-Mar	103	\$50,145
1997	5-Jan	26-Mar	81	\$19,702
1998	19-Jan	24-Mar	65	\$3,610
1999	8-Dec	3-Mar	86	\$4,524
2000	5-Jan	22-Mar	78	\$4,500
2001	3-Jan	14-Mar	71	\$14,242

8.2 Riverhurst Seasonal Road

The Riverhurst seasonal road has operated intermittently for many years. In years when an official road is opened, the Department establishes and maintains it. The Department may decide not to open the seasonal road if the ice does not become sufficiently thick early enough in the season. Most often, the locals will create their own winter trail across the ice in the years that the Department opts not to open a seasonal road. In these cases, the locals are responsible for the maintenance and costs of the road and therefore there is no official record of these years. An estimate of 100 vehicles per day used this seasonal road, a total of 900 vehicles during the official operating season. The history of the official Riverhurst seasonal road is shown in table below.

Table 6. History of the Riverhurst Seasonal Road

Year	Opening	Closing	Length(days)
1991	9-Jan	14-Mar	65
1992	12-Feb	27-Feb	16
1993	25-Jan	3-Mar	38
1994	9-Mar	14-Mar	5
1995	23-Jan	11-Mar	47
1996	11-Jan	7-Apr	87
1997	20-Jan	20-Mar	60
1998	N/A	N/A	N/A
1999	1-Feb	19-Mar	47
2000	N/A	N/A	N/A
2001	4-Mar	12-Mar	9

8.3 Wollaston Lake Ice Road

The Wollaston Lake ice road has been operating for many years. The seasonal road crosses the ice on Wollaston Lake and is established and maintained each year by the Hatchet Lake Economic Development Corporation on behalf of the Department. The 2001 season officially began for suggested safe maximum loads February 20th and ended April 8th. Initially, the roadway was 50 km in length, but part of the road had to be relocated during the season due to the development of a pressure ridge. This construction shut the road down for two days in March and added seven km to the total length. The total cost was \$95,844 during 2001, with a unit cost of \$1,681 per km and \$1,997 per day. An estimate of 100 vehicles per week used the roadway, a total of 655 vehicles during the operating season. The history of the official Wollaston Lake ice road is shown in Table 8 below.

Table 7. History of the Wollaston Lake Ice Road

Year	Opening	Closing	Length(days)	Cost
1986	10-Jan	31-Mar	81	N/A
1987	4-Feb	31-Mar	56	N/A
1997	26-Jan	31-Mar	65	N/A
1998	11-Jan	31-Mar	80	N/A
1999	15-Feb	31-Mar	45	N/A
2000	17-Jan	31-Mar	75	\$126,666
2001	20-Feb	8-Apr	46	\$95,844

8.4 Athabasca Basin Seasonal Road

The Athabasca Basin seasonal road is made up of a collection of four shorter sections and is maintained by the Athabasca Basin Economic Development Corporation. The sections from Points North to Black Lake and from Stony Rapids to Shasko Bay are currently bladed trails and will require yearly repair work until the roadway is reconstructed to an all weather highway standard. The sections from Shasko Bay to Uranium City cross the ice of Lake Athabasca. Winter conditions were not very favourable in 2001, leading to an inadequate traveling surface until late January.

An estimated 3 000 light vehicles used the road in 2001 as well as 200 confirmed loads of freight. The majority of the freight loads were materials for water and sewer projects in Stony Rapids and Fond du Lac and an expansion for the Fond du Lac school.

The packing and blading activities stayed within the maintenance forecasts. The combined length is 348 km from Points North to Uranium City. The total cost of building and maintaining the four seasonal roads was \$988,969 with a unit cost of \$2,842 per km. Costs in Tables 8 to 11 do not include \$9,776 for signing and \$150,000 for supervisor salary and office expenses. Historical data of the sections are shown in the tables below.

Table 8. History of the Athabasca Seasonal Road (Points North to Black Lake)

Year	Opening	Closing	Length (days)	Length (km)	Cost
2000	1-Nov	31-Mar	152	180	\$634,980
2001	6-Dec	31-Mar	116	180	\$390,667

Table 9. History of the Athabasca Seasonal Road (Stony Rapids to Shasko Bay)

Year	Opening	Closing	Length (days)	Length (km)	Cost
2000	1-Feb	31-Mar	60	51	\$142,010
2001	6-Dec	31-Mar	116	51	\$310,526

Table 10. History of the Athabasca Seasonal Road (Shasko Bay to Fond du Lac)

Year	Opening	Closing	Length (days)	Length (km)	Cost
2000		31-Mar	N/A	32	\$96,500
2001	8-Feb	31-Mar	52	32	\$95,000

Table 11. History of the Athabasca Seasonal Road (Fond du Lac to Uranium City)

Year	Opening	Closing	Length (days)	Length (km)	Cost
2000	1-Mar	31-Mar	31	100	\$15,000
2001	26-Feb	6-Mar	9	85	\$33,000

Costs were higher in 2001 for the Stony Rapids to Shasko Bay section because construction of the overland route took place in October and was completed by mid December.

9.0 Conclusions

Overall, the ferry system is well utilized. In 2001, the ferry system operated above the ten year average traffic levels. Year to year traffic fluctuations at individual ferries seem to be caused by differences in the length of the operational season, weather and local economic activity. Half of the 12 cable ferries carried more traffic in 2001 than in 2000.

Low water levels on the South Saskatchewan River caused problems for the Clarkboro, Hague, St. Laurent, Lemsford, Lancer and Estuary ferries. These ferries limited their carrying capacity by lowering the number of vehicles per trip and turning away some of the larger trucks. This caused longer waits for motorists at the crossings. The Lemsford ferry moved to an alternate location and the Lancer ferry was shut down for the season in August.

The seasonal roads seem to be well used and provide a useful service to isolated communities.

9.1 Operating Season/Downtime

- As in previous years, the Riverhurst ferry had the longest operating season, extending into December 2001.
- The Lancer ferry shut down in August due to the formation of a sandbar in the river.
- Mechanical problems at all of the ferries were fixed within a reasonable amount of time.
- The operational season of the seasonal roads is driven primarily by the timing and the severity of winter weather.

9.2 Traffic Volumes

- The Clarkboro ferry had record traffic volumes in 2001. Traffic has increased by 44 percent since 1998.
- Traffic on the Lancer ferry decreased by 55 percent in 2001 compared to traffic volumes in 2000 due to the formation of a sandbar.
- Lemsford ferry traffic increased by 35 percent over the record low in 2000. The increase at Lemsford can be directly attributed to the shut down of the neighbouring Lancer ferry.

9.3 Vehicle Classification

- The Hague, Wingard and Riverhurst ferries have a high percentage of "other" vehicles, which are normally interpreted as farming and recreational vehicles.
- The Paynton and Cecil ferries have a large percentage of straight trucks, which are used primarily for short distance hauling.
- Riverhurst has the highest percentage of single and multi trailer semi trucks, five percent.

10.0 Recommendation

The Department require the operators of the Wollaston Barge ferry to collect vehicle type information using the classification system used by the rest of the ferries when the operating agreement is renegotiated.

Appendix A



Ferry Traffic Data Summary

Ferry crossing _____ Month of _____

Day	LGT	Straight Trucks	Semi Trailer	Multi Trailer	No. Pass	Other	Comments
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3							
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Saskatchewan
Highways and
Transportation

Ferry Traffic Data Summary

Ferry crossing _____ File No. _____ Month of _____, 200__

Shift						
Day	LGT	Straight Trucks	Semi Trailer	Multi Trailer	No. Pass	Other
1						
2						
3						
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25						
26						
27						
28						
29						
30						
31						
Totals						

Statement Certified Correct _____

Ferry operator _____

KEY

LGT	-Cars & Pickups
Straight Trucks	-Non-articulated
Semi Trailer	-Single Trailer
Multi-Trailer	-2 or more Trailers

Notes:

- 1) "Other" includes farm or construction equipment
- 2) Give details in "Comments" ie: dangerous goods equipment type, product hauled etc.

Shift _____
Operators 1, _____
2, _____

[illegible]

Ferry operator

Appendix B

2001 Ferry Downtime

Ferry	Date	Hours	2001 Total Downtime	Reason
Riverhurst	May 3	4	68	Repairs
	May 20	4		High Wind
	June 4	4		Repairs
	June 28	5		Repair Pulley
	July 9	1		Repairs
	July 13	2		Repair Pulley
	August 13	1		Repair Pulley
	August 14 to August 15	36		Repair Cable
	August 30	1		Repair Cable
	September 9	3		Repairs
	October 9	1		Repair Pulley
	November 7	3		Repairs
	November 29	3		Repairs
Paynton	August 2	12	12	Low Water
Lemsford	October 26	12	12	Ice
Wingard	October 25 to October 26	24	24	Ice
Lancer	May 3	12	1287	Low Water
	May 10 to June 3	300		Low Water
	August 11 to Season End	975*		Low Water

* Assume Season End was November 1

Appendix C

Historic Traffic Volumes

Ferry	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Average
Clarkboro	34 291	37 284	34 674	42 448	31 975	39 338	42 991	40 839	52 185	53 780	58 667	42 588
Riverhurst	32 613	38 835	40 242	40 076	41 291	36 449	50 766	45 915	42 775	50 007	47 867	42 440
Paynton	28 662	34 293	42 058	30 686	30 453	30 172	34 365	32 453	28 808	33 749	31 348	32 459
Weldon	27 586	28 460	24 754	30 465	26 268	29 657	29 455	28 003	30 382	27 770	25 875	28 061
St.Laurent	25 842	24 017	18 556	20 421	30 030	19 875	16 987	17 133	29 143	29 980	23 796	23 253
Lemsford	13 368	13 588	13 381	13 471	12 170	12 805	14 393	11 849	11 730	11 623	15 659	13 094
Wingard	9 511	10 628	10 115	10 719	10 687	9 878	9 420	12 467	12 227	12 791	13 158	11 055
Cecil	12 054	13 887	13 210	12 752	12 678	11 603	11 303	11 234	11 016	11 484	13 073	12 209
Hague	13 258	15 700	20 883	14 442	12 425	11 961	14 577	13 122	12 845	12 156	12 652	14 002
Estuary	7 172	7 900	8 153	7 278	6 844	8 463	9 058	9 217	9 793	10 437	9 541	8 532
Fenton	3 079	7 394	6 517	9 730	8 582	8 366	8 716	8 324	9 640	8 533	8 563	7 949
Lancer	5 779	6 928	7 047	7 649	5 673	6 789	6 685	6 967	7 604	7 421	3 324	6 533
Cumberland	20 891	23 192	24 000	23 041	28 198	19 082	Closed	Closed	Closed	Closed	Closed	23 067
Total	234 106	262 106	263 590	263 178	257 274	244 438	248 716	237 523	258 148	269 731	263 523	254 758

Appendix D

Historic Passenger Volumes

Ferry	1996	1997	1998	1999	2000	2001	Average
Clarkboro	N/A	N/A	N/A	N/A	69 292	98 654	83 973
Riverhurst	74 355	95 671	87 956	81 526	100 979	90 056	88 424
Paynton	N/A	N/A	N/A	N/A	60 119	55 475	57 797
Weldon	N/A	N/A	N/A	N/A	N/A	49 555	49 555
St.Laurent	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lemsford	N/A	N/A	N/A	N/A	21 548	28 651	25 100
Wingard	N/A	N/A	N/A	N/A	24 417	33 260	28 839
Cecil	N/A	N/A	N/A	N/A	N/A	24 098	24 098
Hague	N/A	N/A	N/A	N/A	13 705	22 221	17 963
Estuary	N/A	N/A	N/A	N/A	19 152	18 045	18 599
Fenton	N/A	N/A	N/A	N/A	N/A	13 236	13 236
Lancer	N/A	N/A	N/A	N/A	13 668	6 113	9 891
Total	74 355	95 671	87 956	81 526	322 880	439 364	183 625